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On perturbation of the spectrum of planar dielectric waveguide by refraction index profile

Linnik V., Pleschinskii N.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2002 IEEE. The problem of calculating the eigenwaves of planar dielectric waveguide with arbitrary refraction index profile is considered. The iterative process based on the exact solutions of this problem in the case of piecewise constant profile is investigated. The abstract perturbation theory for operator equation with spectral parameter is extended.

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Keywords

Abstracts, Boundary value problems, Dielectrics, Eigenvalues and eigenfunctions, Equations, Interpolation, Iterative methods, Planar waveguides, Propagation constant